



DOON UNIVERSITY, DEHRADUN
End Semester Examination, 1st Semester, 2023
Academic Year 2023-2024 (Odd Semester)
School of Technology
Department name: Computer Science
Programme Name: B. Tech. (CSE)

Course Code with Title: CEC 101, Problem solving concepts and programming in C

Time Allowed 2.00 Hours

Maximum Marks: 60

SECTION: A

Q1. Attempt all questions. Each question is of one marks. (1X 12 = 12 Marks)

- (i) If an Integer number begin with 0x66, it is _____.
- a) Hexadecimal b) Decimal
c) Binary d) Octadecimal
- (ii) Who is the father of C language?
- a) Steve Jobs b) James Gosling
c) Dennis Ritchie d) Rasmus Lerdorf
- (iii) Mark the incorrect statement
- a) Operators are symbols to perform mathematical or logical operations
b) Variable is a name of memory location to store data
c) main function is the entry point of C program
d) Function declaration is there in library files but actual code is there in header files
- (iv) Mark the correct output of the following C code:

```
#include <stdio.h>
int main()
{
    int i = 0;
    int x = i++, y = ++i;
    printf("%d %d\n", x, y);
    return 0;
}
```

- a) 0, 2 c) 0, 1
b) 1, 2 d) none of these
- (v) The process of removing errors is called _____.
- a) compiling b) fixing
c) debugging d) None of these

- (vi) Keywords in C are in _____ letters.
 - a) UpperCase c) CamelCase
 - b) LowerCase d) None of the above.
- (vii) In short int, long is the _____ and int is _____.
 - a) datatype and qualifier c) qualifier and datatype
 - b) constant and qualifier d) constant and datatype
- (viii) The..... symbol is used to define pre-processor?
- (ix) pow() is a predefined function in _____ header file.
- (x) The Loop executing statement that run endlessly is called as _____.
- (xi) Is the following statement true or false: C is low level language.
- (xii) Is following statement true or false: A structure contains homogenous data.

SECTION: B

- Q2.** Attempt **any four questions** out of five. Each question is of six marks. (6 X 4 = 24 Marks)
- a) Explain various primitive and derived datatype along with size.
 - b) Define following terms: header file, compiler, low level language, HLL.
 - c) What is pointer? Explain with help of a C program.
 - d) Define file? Explain various file functions with suitable example.
 - e) Differentiate between union and structure with suitable examples and definitions.

SECTION: C

Each question contains two parts a & b. Attempt any one part of your choice from each question.

- Q3.** (12X 1 = 12 Marks)

- a. Write a C program to compute the grade of students using switch case. Read the total marks from the user (out of 100) and then calculate the grade and display the user.

Marks	Grade
Marks<40	F
40<=marks<60	C
60<=marks<70	B
70<=marks<80	B+
80<=marks<90	A
90<=marks<100	A+

OR

- b. Write a C program which performs following computation: i) count the number of vowels in the string given by user ii) reverse the string. Implement this program using function.

- Q4.** (12X 1 = 12 Marks)

- a. Write a program to read and print the record (name, rollno, branch, admission year, phone no, total marks) of 40 students using structure.

OR

- b. Write a program in C to copy the contents of a file from one file to another file.